
Siphoneugena delicata (Myrtaceae), a New Species from the Montane Atlantic Forests of Southeastern Brazil

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ABSTRACT. *Siphoneugena delicata* Sobral & Proença (Myrtaceae), from the montane Atlantic forests of the Brazilian states of Espírito Santo and Minas Gerais, is described and illustrated. The new species is related to *S. guilfoyleiana* Proença, known until now only from the restinga vegetation in the state of São Paulo, and *S. reitzii* D. Legrand, from montane habitats from southern Brazil. It is distinguished from both by the shrubby habit, smaller leaves to 12 mm long with the midvein plane or sulcate adaxially, and clearly apiculate flower buds. Additionally, it is set apart from *S. guilfoyleiana* by the puberulous branches and deciduous bracteoles and from *S. reitzii* by the markedly rugose bark.

RESUMO. *Siphoneugena delicata* Sobral & Proença (Myrtaceae), da floresta ombrófila altomontana dos estados de Espírito Santo e Minas Gerais, é descrita, ilustrada e comparada com *S. guilfoyleiana* Proença, conhecida somente para a restinga do estado de São Paulo, e *S. reitzii* D. Legrand, da floresta ombrófila montana do sul do Brasil. *S. delicata* se distingue de ambas pelo hábito arbustivo, folhas menores (até 12 mm de comprimento) com a nervura central sulcada ou plana na face adaxial e botões florais marcadamente apiculados. Além disso, separa-se de *S. guilfoyleiana* pelos ramos pubérulos e bractéolas decíduas e de *S. reitzii* pelo córtex rugoso.

Key words: Brazil, IUCN Conservation Status, Myrtaceae, *Siphoneugena*.

Siphoneugena O. Berg is an American genus recently revised by Proença (1990), who recognized eight species ranging from the Antilles to the southernmost Brazilian state of Rio Grande do Sul, five of them growing in montane habitats at least 900 m above sea level, two at lower altitudes, and one in coastal scrubby forest (restinga). The genus can be recognized by flowers bearing an evident hypanthium that is constricted above

the ovary and falls as an entire piece after anthesis, ovary two-celled with more than two ovules per locule, fruits with a circular scar instead of calyx lobes, and seeds with two plano-convex cotyledons and hypocotyl not evident (Proença, 1990). Among recent collections in the mountainous massif along the border of the southeastern Brazilian states of Espírito Santo and Minas Gerais, we have found a small-leaved species of *Siphoneugena* that we consider as new and describe herein.

Siphoneugena delicata Sobral & Proença, sp. nov.

TYPE: Brazil. Espírito Santo: Santa Teresa, Lombardia, Res. Biol. Augusto Ruschi, 19 Sep. 2001, L. Kollmann, W. Pizziolo & E. Bausen 4663 (holotype, MBML; isotypes, BHCB, MBM, UB). Figures 1, 2.

Species haec *S. guilfoyleianae* et *S. reitzii* proxima; a prima ramulis pilosis, foliis minoribus, alabastris apiculatis et bracteolis deciduis, altera habito fruticoso, cortice forte rugoso, foliis nervis centralibus supra planis vel sulcatis et alabastris apiculatis distincta est.

Shrub or treelet to 3 m high; bark rugose; plants glabrous except for twigs and internal side of calyx lobes with curled white trichomes ca. 0.1 mm. Leaves elliptic or elliptic-obovate, 8–12 × 5–8 mm, occasionally slightly discolored in dried material, with translucent glands generally visible on the abaxial side as dark dots to 0.1 mm diam.; apex widely acute or rounded; base widely cuneate; midvein plane to slightly sulcate adaxially and abaxially prominent at least to the middle of blade and then diminishing distally; secondary veins 5 or 6 pairs, generally invisible on both faces, occasionally faintly visible adaxially; marginal vein continuous, hardly visible, to 0.3 mm from the margin, the margin itself strongly revolute; petioles 0.7–1 × 0.4–0.5 mm, occasionally with scattered white trichomes as the twigs. Flowers 1 or 2, solitary or paired, mostly 2, axillary or ramiflorous, at the apex of a small peduncle to



Figure 1. *Siphoneugena delicata* Sobral & Proença. Unmounted isotype at BHCB (Kollmann *et al.* 4663).

0.5 × 0.3 mm, the peduncle sometimes with hemispheric bracts to 0.2 × 0.2 mm; pedicels 0.8–1 × 0.2–0.3 mm; bracteoles rounded or widely triangular, 0.2–0.3 × 0.3 mm, deciduous at or before anthesis, occasionally with 2 lateral glandular setae to 0.2 mm at their bases; flower buds spindle-shaped, 4–5 × 2 mm, apically closed, bearing an apiculum 0.4–0.5 mm, this occasionally crowned with a tuft of trichomes to 0.1 mm; calyx opening by tearing in 3 to 4 lobes of irregular shapes, mostly ± rounded or

elliptic-rounded and 1.5–1.8 × 1.2–2 mm, the lobes internally with scattered white trichomes to 0.1 mm, sometimes the fragment that bears the apiculum markedly larger than the others and calyptrate, 1.5–1.8 mm diam.; petals 3 or 4, attached to the calyx lobes, spatulate, 1.5 × 0.5–1 mm, with trichomes as the calyx lobes; stamens about 80, 5 mm long, the anthers globose, 0.3–0.4 × 0.3 mm, with 1 apical gland; hypanthium to 2 mm deep, circumcissile at anthesis; style 5–6 mm, the stigma punctiform; ovary

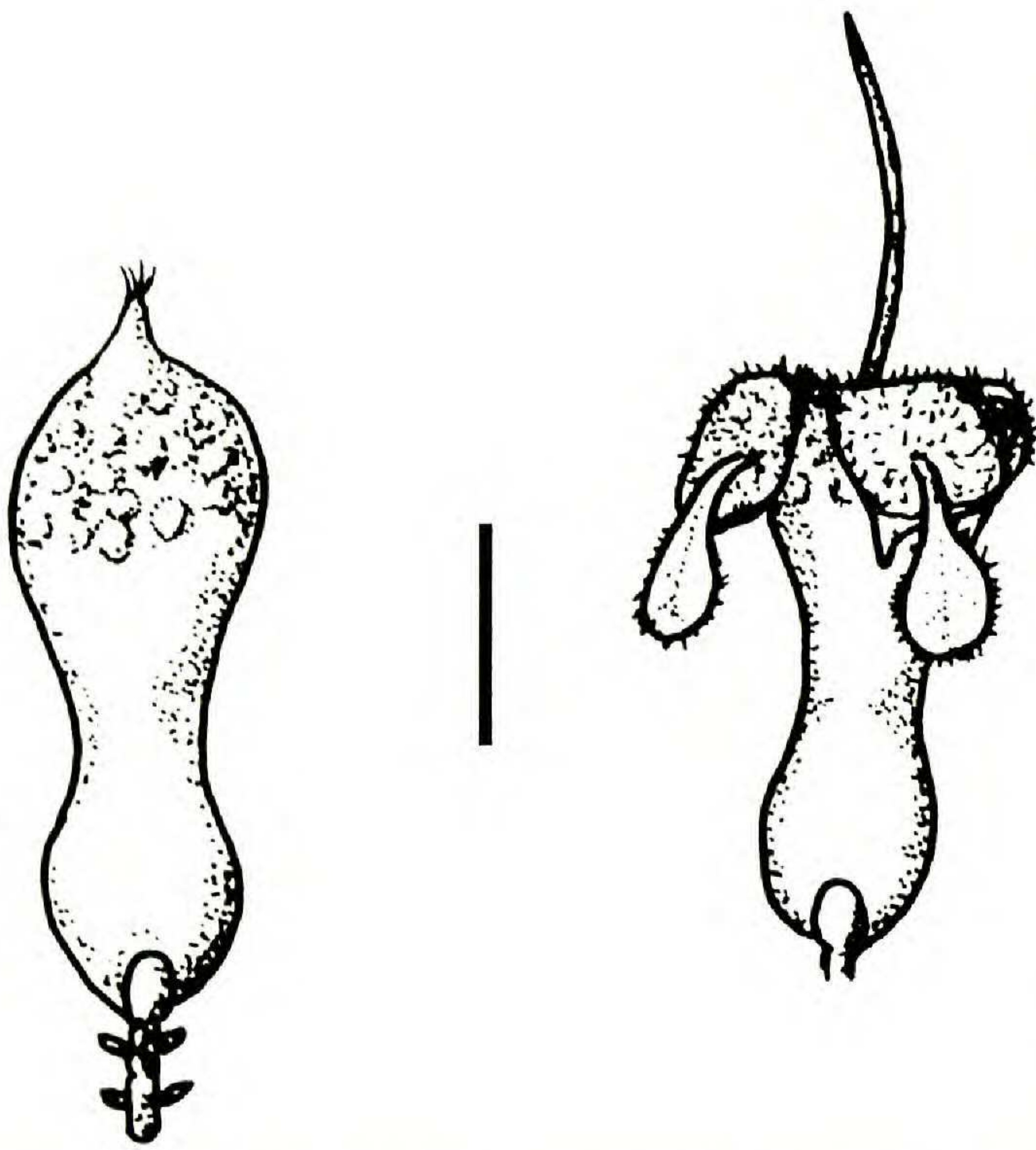


Figure 2. *Siphoneugena delicata* Sobral & Proença. Schematic drawing of flower bud (left) and flower after anthesis (right) (both from Kollmann *et al.* 4663, isotype, BHCB). Scale bar = 2 mm.

bilocular with 2 to 4 centrally attached ovules by locule. Fruits globose, to 5 mm diam., vinaceous when ripe, 1- to 2-seeded; seeds reniform, $4 \times 2\text{--}3$ mm; mature embryo not examined.

Distribution, habitat, and phenology. *Siphoneugena delicata* is a shrub or treelet principally at forest edges at altitudes from 800 to 2100 m above sea level. It has been collected in humid montane forests in the municipality of Santa Teresa, in the state of Espírito Santo, and in the Serra do Caparaó National Park, near the border of the states of Espírito Santo and Minas Gerais, in places where forest formations are presently highly fragmented due to human activities such as farming and timber exploration. Flowering material was collected in September and fruiting material in September and October.

Conservation status. Collection sites of *Siphoneugena delicata* are mostly 100 km apart from each other, the scarcity of collections allows us to consider its area of occupancy to be smaller than 20,000 km² (criterion B2), it is known from no more than 10 locations (B2a), and its habitat presents a continuing decline of extent and/or quality (B2b(iii)) because land clearing for farming and timber exploration are still causes of environmental impact on the Atlantic forest (Aguilar *et al.*, 2005). Based on this evidence and evaluating this species according to the criteria proposed by IUCN (2001), *S. delicata* could fit the category Vulnerable (VU), through the criteria B2ab(iii).

Affinities. This species is related to *Siphoneugena guilfoyleiana* Proença, from which it can be distinguished by the following couplet:

- 1a. Tree to 12 m; twigs glabrous; leaves $30\text{--}50 \times 14\text{--}26$ mm; petioles $2\text{--}3 \times 1.5$ mm; midvein raised on both surfaces; bracteoles to 1 mm, persisting after anthesis; flower bud with an apical pore, not apiculate; stamens about 140; restingas of São Paulo *S. guilfoyleiana*
 1b. Shrub or treelet to 3 m; twigs with trichomes to 0.1 mm; leaves $8\text{--}12 \times 5\text{--}8$ mm; petioles 1×0.5 mm; midvein flat or slightly sulcate adaxially; bracteoles to 0.3 mm, deciduous at or before anthesis; flower buds clearly apiculate; stamens about 80; montane Atlantic forests from Espírito Santo and Minas Gerais *S. delicata*

Additionally, *Siphoneugena delicata* can sometimes be confused with small-leaved forms of *S. reitzii* D. Legrand, another species from montane habitats of southern Brazil; nevertheless, *S. reitzii* is a tree to 15 m high with smooth and exfoliating bark, with blades with the midvein raised on both surfaces and flower buds with four clearly visible lobes that open regularly at anthesis. In the collection sites, *S. delicata* is sympatric with two additional species of *Siphoneugena*, *S. dussii* (Krug & Urban) Proença and *S. kiaerskoviana* (Burret) Kausel; nevertheless, both species can be readily distinguished by their larger leaves (30–90 mm long) and flowers with four evident calyx lobes.

Etymology. The epithet *delicata* alludes to the small leaves and habit of this species relative to those of its congeners.

Paratypes. BRAZIL. **Espírito Santo:** Santa Teresa, M. Sobral & H. Boudet Fernandes 9440 (BHCB, MBM, MO); J. Rossini & E. Bausen 553 (MBML). **Minas Gerais:** Alto Caparaó, Vale Encantado, L. Leoni 4015 (ESA, GFJP).

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